



AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017
4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: TC-5548

To,

Date: 29-06-2022

ASSISTANT EXECUTIVE ENGINEER
PROJECT SUB DIVISION
BBMP
BANGALORE

Dear Sir,

Sub: M/s. Civil Pro Services for the work of "PROVIDING RO PLANT IN
BYATARAYANAPURA IN WARD NO.07."

Ref: 1. Work Order No: EE(Project)/YnkZone/WO/135/2020-21

2. Job code: 007-21-000002

We are herewith forwarding to Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara
Dasarahalli, Basaveshwaranagara, Bangalore-79. First and Final bill duly verified and certified
that the Work is satisfactory and for a Gross Value of Rs.15,45,279.47/- (Rs. Fifteen Lakhs Forty
Five Thousand Two Hundred Seventy Nine and Forty Seven Paise Only).

Thanking you,

S. Aggarwal AE
For NMA

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



Yours faithfully,

For Civil Pro

R KARTHIK RECHAN

AUTHORIZED SIGNATORY
CIVIL PRO

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: TC-5548

NAME OF WORK: Providing RO Plant in Byatarayanapura in Ward No.07

QC ABSTRACT

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
1	Cement	Materials				
		Fineness by dry sieving	One Test		1	1
		Fineness by Air permeability method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
2	Coarse aggregate(40 mm down size)	Compressive Strength	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
4	Fine aggregate	Aggregate Impact Value	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
5	Steel	Material finer than 75 micron	One Test		1	1
		Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
6	Block(400*200*200)	ReBend test	One Test		1	1
		BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
7	RCC(M25)	COMPRESSIVE STRENGTH	One Test		1	1
8	Mortar Sand	Compressive Strength(7days and 28days)	4 set /5-50 cum	8.06	8	8
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
9	Plaster Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

Asst. Executive Engineer

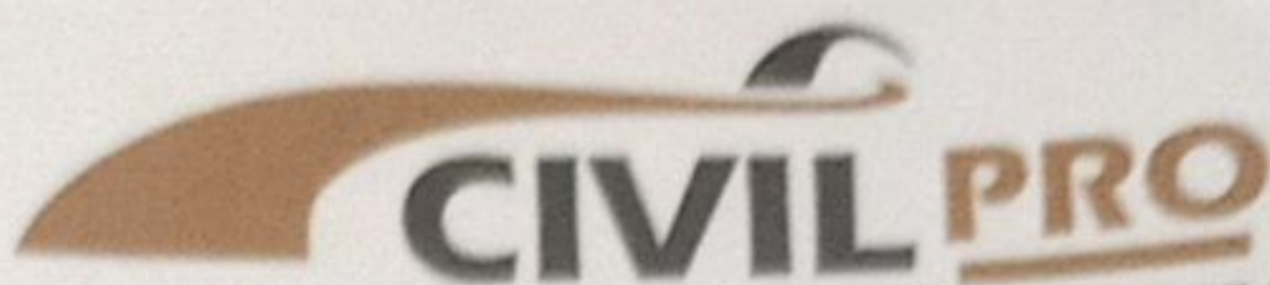
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Yelahanka Zone

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Certificate No.: TC-1548

Format No. CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Date: 25-04-22

Lab ID : CP-2022-10-13-06
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dacarahalli,
Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type : Birla Super 53grade
Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification .
IS 4031 (Part 1,2,3,4,5, 6,11):1988
IS 4031 Part 1 (RA 2021) DETERMINATION OF FINENESS BY DRY SIEVING,
Clause 4.4
IS 4031 Part 2, (RA 2018) Determination of Fineness by Blaine Air Permeability
Method, Clause 5
IS 4031 Part 3, (RA 2019) Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste,
Clause 5
IS 4031 Part 5, (RA 2019) Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, (RA 2019) DETERMINATION OF DENSITY . Clause 6

Date of test : 23-04-22

Environmental Conditions during test :

Temperature:
Humidity:

26°C
72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.1	-
2	Finess by Air permeablity method (m ² /kg.Min)	284.5	225m ² /kg. Min
3	Density (gm/cc)	3.13	-
4	Standard Consistency (%)	28%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.

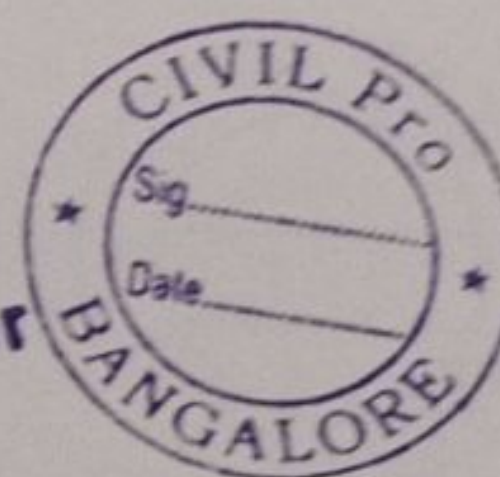
All information furnished by Customer/Representative

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Samples will be disposed after 30 days from the date of issue of test certificate

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92.



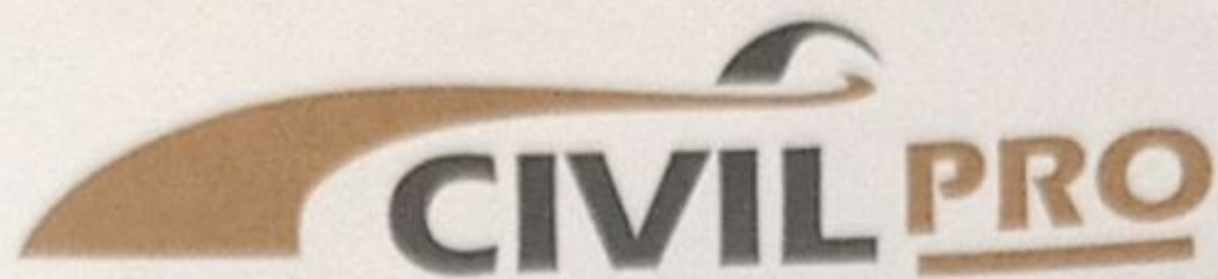
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Quality Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Date: 21-05-22

Lab ID : CP-2022-10-13-06
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli, Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type : Birla Super 53grade
Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification .
IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 6, (RA 2019) Determination of Compressive Strength, Clause 6
Date of test : 23-04-22
Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Compressive Strength			
Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	29.5N/mm ²	Not less than 27 N/mm ²
2	7 Days	38.5N/mm ²	Not less than 37 N/mm ²
3	28 Days	58.5N/mm ²	Not less than 53 N/mm ²

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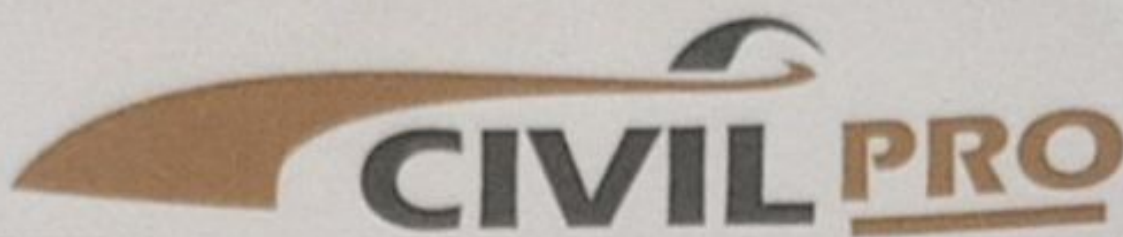
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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2022-10-13-06 Date: 25-04-22
Customer : Assistant Executive Engineer, Project Sub Division, BBMP,
Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara
Dasarahalli, Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type : 40mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 22-04-22

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	214	214	1.4	98.6	90-100
3	20 mm	7254	7468	49.8	50.2	30-70
4	10 mm	4442	11910	79.4	20.6	10-35
5	4.75 mm	2685	14595	97.3	2.7	0-5
6	Pan	405	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID

: CP-2022-10-13-06

Date: 25-04-22

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.6	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.3	
3	Specific Gravity	2.64	—
4	Bulk Density(Loose) (Kg/l)	1.49	—
5	Bulk Density(Compacted) (Kg/l)	1.52	—
6	Water Absorption(%)	0.17	—

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[Signature]

[Signature]
Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore



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Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID :
Customer : CP-2022-10-13-06 Date: 25-04-22
: Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli,
Basaveshwaranagara, Bangalore-79
Customer Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type/ Size : 20mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 22-04-22

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	237	237	4.7	95.3	90-100
3	10 mm	2544	2781	55.6	44.4	25-55
4	4.75 mm	2107	4888	97.8	2.2	0-10
5	Pan	112	5000	100	0	-

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Certificate No.: TC-5548

Format No: CP/TF/01

Lab ID

TEST REPORT ON COARSE AGGREGATES

: CP-2022-10-13-06

Date: 25-04-22

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.7	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.4	
3	Specific Gravity	2.65	—
4	Bulk Density(Loose) (Kg/l)	1.53	—
5	Bulk Density(Compacted) (Kg/l)	1.57	—
6	Water Absorption(%)	0.19	—
7	Aggregate crushing Value(%)	25.6	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.5	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

* The results obtained are satisfactory as per standard requirements.

Note:

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Project Division
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BBMP, Bangalore - 92



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Quality Manager

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Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2022-10-13-06 Date: 25-04-22
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarhalli,
Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type : Fine Aggregate
Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
Date of test : 22-04-22

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	32	32	3.2	96.8	90-100	90-100	90-100	95-100
3	2.36 mm	42	74	7.4	92.6	60-95	75-100	85-100	95-100
4	1.18 mm	245	319	31.9	68.1	30-70	55-90	75-100	90-100
5	600 micron	201	520	52.0	48.0	15-34	35-59	60-79	80-100
6	300 micron	199	719	71.9	28.1	5-20	8-30	12-40	15-50
7	150 micron	195	914	91.4	8.6	0-10	0-10	0-10	0-15
8	Pan	86	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

Page 1/2

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Certificate No.: TC-5548

TEST REPORT OF FINE AGGREGATE

Date: 25-04-22

Lab ID : CP-2022-10-13-06

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.22	-
2	Specific Gravity	2.54	-
3	Material finer than 75 micron(%)	9.5	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Quality Manager

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Project Division
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Certificate No.: TC-05408

Format No: CP/TF/01

TEST RESULTS OF STEEL

Lab ID : CP-2022-10-13-06 Date: 25-04-22
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli,
Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 22-04-22
Sample Type : INDUS
Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2019.
Date of test : 23-04-22

SLNo	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm ²)	(N/mm ²)	(%)		
1	INDUS	Fe500	8	0.392	522	638	21.0%	Satisfactory	Satisfactory
2	INDUS	Fe500	10	0.615	542	668	20.0%	Satisfactory	Satisfactory
3	INDUS	Fe500	12	0.884	559	672	20.0%	Satisfactory	Satisfactory
4	INDUS	Fe500	16	1.582	568	680	19.0%	Satisfactory	Satisfactory
5	INDUS	Fe500	20	2.472	583	698	19.0%	Satisfactory	Satisfactory

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT FOR SAND MASONRY MORTARS

Lab ID : CP-2022-10-13-06 Date: 07-06-22

Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.

Address : Project Sub Division, BBMP, Bangalore.

Project Name : Providing RO Plant in Byatarayanapura in Ward No.07

Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli, Basaveshwaranagara, Bangalore-79

Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 04-06-22

Sample Type : Fine Aggregate, M.Sand for Mortar

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2116-1980 (RA-2007) (Specification for Sand for Masonry Mortars)
IS: 2386 :1963(Part - 1, 3) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 04-06-22

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS: 2116-1980 (RA-2007)
1	4.75 mm	0	0	0	100	100
2	2.36 mm	22	22	2.2	97.8	90-100
3	1.18 mm	242	264	26.4	73.6	70-100
4	600 micron	215	479	47.9	52.1	40-100
5	300 micron	242	721	72.1	27.9	5-70
6	150 micron	198	919	91.9	8.1	0-15
7	Pan	81	1000	100.0	0.0	0

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Certificate No.: TC-5548

TEST REPORT FOR SAND MASONRY MORTARS

Lab ID

: CP-2022-10-13-06

Date: 07-06-22

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.95	—
2	Specific Gravity	2.5	—
3	Material finer than 75 micron(%)	10.2	Crushed Fine aggregate Max 15%
4	Compacted Bulk Density (Kg/litre)	1.89	—
5	Loose Bulk Density (Kg/litre)	1.72	—

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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R KARTHIK RECHAN

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Page 2/2
End of Report****

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TEST REPORT FOR PLASTER SAND

Lab ID : CP-2022-10-13-06 Date: 07-06-22
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli,
Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-06-22
Sample Type : Plaster Sand
Reference to BIS codes : IS: 383 : 2016 (Specification for Coarse and fine Aggregates)
IS1542:1992 (RA 2019) (Sand for Plaster - Specification)
IS: 2386 :1963(Part - 1, 3) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
Date of test : 04-06-22

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 1542:1992
1	10 mm	0	0	0	100	100
2	4.75 mm	18	18	1.8	98.2	95-100
3	2.36 mm	22	40	4.0	96.0	95-100
4	1.18 mm	42	82	8.2	91.8	90-100
5	600 micron	102	184	18.4	81.6	80-100
6	300 micron	310	494	49.4	50.6	20-65
7	150 micron	398	892	89.2	10.8	0-15
8	Pan	108	1000	100.0	0.0	---

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Certificate No.: TC-5548

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2022-10-13-06

Date: 07-06-22

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.98	—
2	Specific Gravity	2.52	—
3	Material finer than 75 micron(%)	10.2	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Date: 13/05/2022

Lab ID : CP-2022-10-13-06
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli, Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 09-05-22
Customer ID : Footing Concrete
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M25 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test : 13/05/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Footing Concrete	M25	06/05/2022	13/05/2022	150.67 X 150.64 X 149.05	22696	8.451	529.5	23.3	22.9
2	Footing Concrete	M25	06/05/2022	13/05/2022	150.26 X 149.16 X 151.82	22413	8.541	510.9	22.8	
3	Footing Concrete	M25	06/05/2022	13/05/2022	149.94 X 150.35 X 149.42	22544	8.958	506.2	22.5	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Date: 03/06/2022

Lab ID
Customer
Address
Project Name
Agency

: CP-2022-10-13-06
: Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
: Project Sub Division, BBMP, Bangalore.
: Providing RO Plant in Byatarayanapura in Ward No.07
: Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli, Basaveshwaranagara, Bangalore-79
: EE(Project)/YnkZone/WO/135/2020-21
: Sample supplied by Agency
: Satisfactory
: 09-05-22
: Footing Concrete
: 150X150X150 mm
: M25 / 28 Days Compressive Strength
: IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/06/2022

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Footing Concrete	M25	06/05/2022	03/06/2022	149.71 X 149.68 X 150.40	22410	8.735	616.6	27.5	27.6
2	Footing Concrete	M25	06/05/2022	03/06/2022	149.14 X 150.94 X 149.01	22511	8.699	593.6	26.4	
3	Footing Concrete	M25	06/05/2022	03/06/2022	151.59 X 150.65 X 150.83	22838	8.164	661.7	29.0	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Date: 23-05-22

Lab ID : CP-2022-10-13-06
Customer : Assistant Executive Engineer, Project Sub Division, BBMP, Bangalore.
Address : Project Sub Division, BBMP, Bangalore.
Project Name : Providing RO Plant in Byatarayanapura in Ward No.07
Agency : Sri.M C Adarsh, #2/427, 8th Main, 17th Cross, Agrahara Dasarahalli, Basaveshwaranagara, Bangalore-79
Customer's Reference : EE(Project)/YnkZone/WO/135/2020-21
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 18-05-22
Sample Type/Size : Solid concrete blocks size (400X200X200)mm
Reference to BIS codes : IS : 2185 (Part 1) : 2005(RA 2020) Concrete Masonry Specification
Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and 10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)
Date of test : 18-05-22

BLOCK DENSITY:

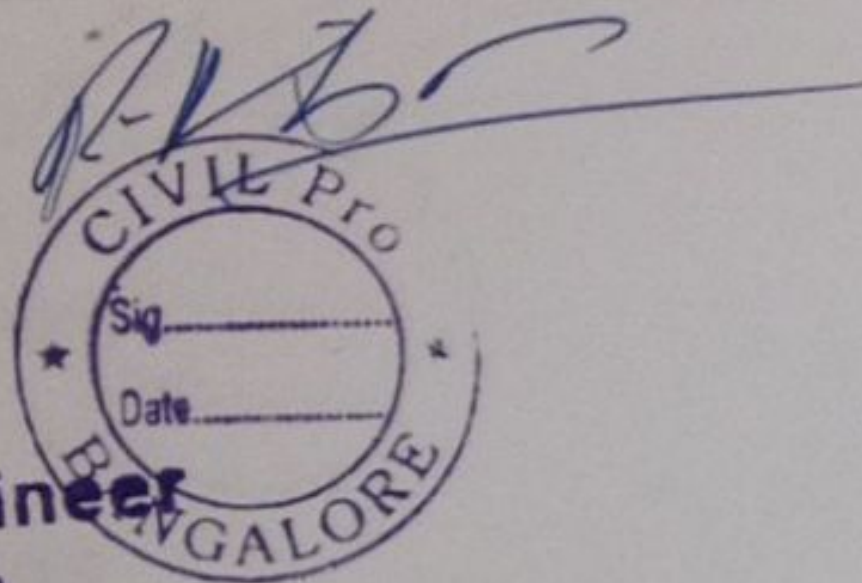
Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10 ⁶	Avg.Block Density in (Kg/cum)	As per IS 2185(Part 1):2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm ³)	Kg	Kg/m ³	Kg/m ³	
1	402	201	202	16322	32.892	2015.2	2018.7	Not less than 1800Kg/m ³
2	405	199	199	16038	31.457	1961.4		
3	399	203	200	16199	33.689	2079.6		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg.Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	32.58	31.15	4.38	3.77	Shall not be more than 10% by mass
2	33.05	31.78	3.84		
3	33.45	32.41	3.09		

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Certificate No.: TC-5548

Lab ID : CP-2022-10-13-06

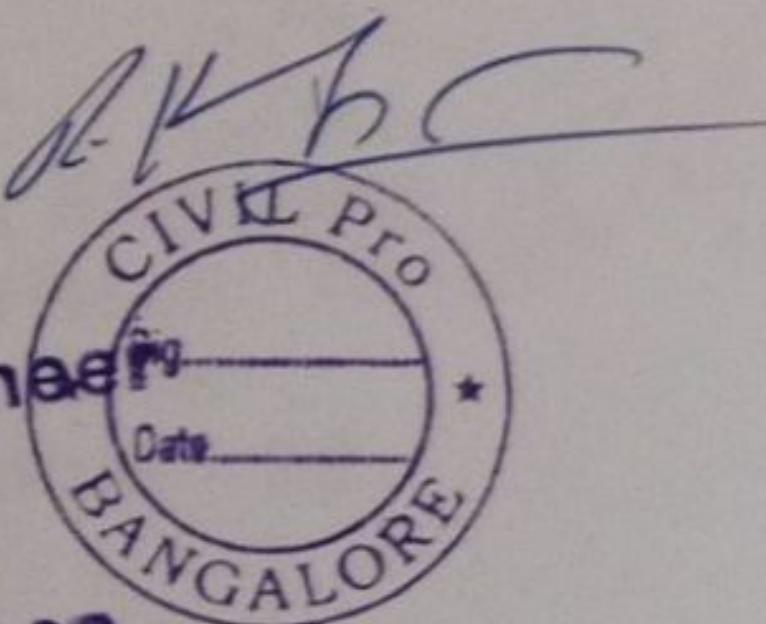
Date: 23-05-22

DIMENSION ANALYSIS

Sl.no	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
1	404	200	203	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
2	401	200	203	
3	401	201	200	
4	404	201	201	
5	400	202	202	
6	401	200	199	
7	401	203	203	
8	403	202	200	
9	403	201	199	
10	403	202	200	
11	404	201	200	
12	401	201	203	
13	401	202	203	
14	401	199	201	
15	401	199	201	
16	403	202	199	
17	400	201	199	
18	403	199	201	
19	400	201	200	
20	399	201	199	
Average of 20	402	201	201	

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Certificate No.: TC-5548

Lab ID : CP-2022-10-13-06

Date: 23-05-22

COMPRESSIVE STRENGTH:

SL No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm ²)	(KN)	N/mm ²	(N/mm ²)
1	400	200	79988	449.1	5.6	5.5
2	401	200	80355	449.3	5.6	
3	401	201	80603	418.2	5.2	
4	404	201	81015	450.3	5.6	
5	400	202	81000	446.9	5.5	
6	401	200	80203	477.4	6.0	
7	401	203	81477	455.3	5.6	
8	403	202	81476	427.9	5.3	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm ²	4.00 N/mm ²
C (4.0)	4.00 N/mm ²	3.20 N/mm ²

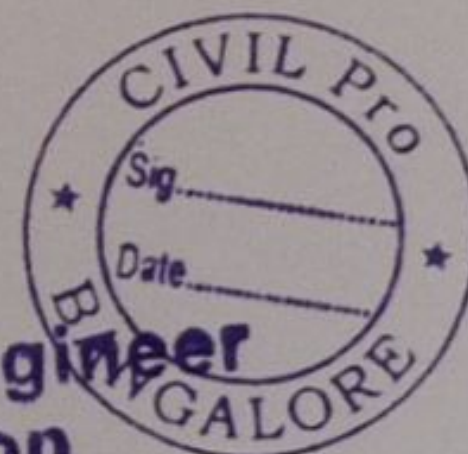
* The Results Obtained are Satisfactory as per Standard Requirements

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